

## CAA112(r) INSPECTION REPORT

Name: MGPI Processing, Inc.	
Address: 1300 Main Street Atchison, KS 66002	Date of Inspection: 1/23-26/2017
County: Atchison	Case No: 17KS0123
Phone: (913) 367-1480	RMP No: 1000 0010 5913
High Risk: No	FRS No: 1100 0044 5073
CAA Title V: Yes 0050002	Program Level: 3
Mailing Address: P.O. Box 130, Atchison, KS 66002	
Process: The facility produces gluten, starch, and alcohol products. Propylene Oxide is subject to RMP. The Modified Starch B process and anywhere an extremely hazardous substance is produced, handled, or stored is subject to the General Duty Clause.	

### SUMMARY OF OBSERVATIONS

A review of the MGPI Processing, Inc. documents and facility revealed the following deficiencies:

- 1. MGPI Processing, Inc. failed to include process chemistry in the process safety information, per 40 C.F.R. Part 68.65(c)(1)(ii),**
- 2. MGPI Processing, Inc. failed to include accurate maximum intended inventory in process safety information, including propylene oxide piping, per 40 C.F.R. Part 68.65(c)(1)(iii),**
- 3. MGPI Processing, Inc. failed to include recognized and generally accepted good engineering practice not included in process safety information for portions of the Modified Starch B process, per 40 C.F.R. Part 68.65(d)(2),**
- 4. MGPI Processing, Inc. failed to have a written schedule for addressing the process hazard analysis, 40 C.F.R. Part 68.67(e),**
- 5. MGPI Processing, Inc. failed to certify compliance with subpart D Program 3 Prevention Program of 40 C.F.R Part 68, per 40 C.F.R. Part 68.79(a),**
- 6. MGPI Processing, Inc. Failed to document resolution of compliance audit findings, per 40 C.F.R. Part 68.79(d),**
- 7. MGPI Processing, Inc. failed to include correct emergency contact telephone number in the risk management plan submittal, 40 C.F.R. Part 68.160(b)(6),**

- 8. MGPI Processing, Inc. failure to correctly indicate non responding facility status in risk management plan submittal, per 40 C.F.R. Part 68.180,**
- 9. MGPI Processing, Inc. failed to notify the National Response Center in 15 minutes of a release of chlorine above the reportable quantity on October 21, 2016, per 40 C.F.R. Part 302.6,**
- 10. MGPI Processing, Inc. failed to notify the National Response Center and local emergency response in 15 minutes of a release of sodium hypochlorite above the reportable quantity on July 24, 2016, per 40 C.F.R. Part 302.6 & 355, and**
- 11. MGPI Processing, Inc. failed to maintain a safe facility by not fully implementing an operating procedure to insure correct alignment during unloading operations leading to a release of chlorine causing injury of employees and public, evacuations, and sheltering in place, per Clean Air Act Section 112(r)(1).**

## **INTRODUCTION**

Amber Whisnant, Krystal Stotts and I, Dave Hensley, Lead Inspector, with the U.S. Environmental Protection Agency (EPA), Region VII, inspected MGPI Processing, Inc. located in Atchison, Kansas on January 23 to 26, 2017.

I contacted Mr. Munim Hussain to notify him of the inspection, on January 18, 2017. I sent an email to Mr. Munim Hussain that same day with a Program 3 checklist and an initial list of documents to be reviewed attached. I asked that employees be notified of the inspection and informed they are allowed to participate. MGPI Processing, Inc. was selected for inspection based on the occurrence of a chlorine release on October 21, 2016. Mr. Munim and I signed a notice of inspection (Attachment 1). I retained a copy and provided a copy to the facility.

We conducted the inspection to determine if the facility complies with Section 112(r) of the Clean Air Act (CAA), as amended in 1990. The inspection also included reporting provisions of the Emergency Planning and Community Right to Know Act (EPCRA) and the release reporting provisions of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

EPA's regulations describing how these laws are to be implemented are found in the Code of Federal Regulations, Title 40, Parts 68 (CAA), 302, 355 (CERCLA), 370, and 372 (EPCRA). The law and the implementing regulations 40 CFR Part 68, Chemical Accident Prevention Program (CAPP) require that the facilities must submit a complete Risk Management Plan (RMP) to the EPA for those regulated chemicals they process in amounts above the applicable threshold quantities after June 21, 1999 and to implement the program described in the RMP.

In addition to RMP, a General Duty Clause (GDC) inspection was also conducted. EPA has published a document, EPA 550-B00-002, dated May 2000 titled "Guidance for Implementation

of General Duty Clause Clean Air Act Section 112(r)(1). This publication is intended solely for the guidance of government personnel but is available to the public at the EPA's website. All attachments mentioned in this inspection report are also in a folder on the accompanying DVD. Attachments may not contain all documents or parts of documents collected at the time of the inspection, however the accompanying folder on the compact disk will have the complete document(s). The compact disk itself is Attachment 21 and contains a copy of this inspection report, the original documents obtained, photographs taken during the inspection, the RMP current at the time of the inspection, emails between MGPI Processing, Inc. and the compliance inspector, checklists, and completed forms.

## **HISTORY OF BUSINESS**

MGPI Processing, Inc. (MGPI) is a gluten, starch, and alcohol producing facility located in Atchison, Kansas. MGPI was formerly known as MGP Ingredients, Inc. and changed its name to MGPI Processing, Inc. in January 2012. The company was founded in 1941.

MGPI has one regulated substance under the 40 C.F.R. Part 68, propylene oxide. Propylene oxide is stored in a bulk pressure vessel and a day tank (Attachment 2, Photographs 3 and 6). Propylene oxide is used in the process of modifying starches, in the Modified B process. The facility operates 24 hours per day, 7 days per week.

## **PERSONS INTERVIEWED AND INDIVIDUAL RESPONSIBILITIES**

<b>Name</b>	<b>Affiliation</b>	<b>Title</b>
Arya Tulva	MGP Ingredients	Plant Manager
Munim Hussain	MGP Ingredients	Corporate Environmental Engineer
Paul Jacosson	Spencer Fane	Outside Legal Council
Randy Rhodes	MGP Ingredients	Safety Manager
Andrew Brought	Spencer Fane	Outside Legal Council

Table 1: Facility Persons involved in this inspection

Amber Whisnant, Krystal Stotts, and I (Dave Hensley) of EPA participated in the inspection. Ms. Whisnant recorded the photo log, and reviewed OSHA 300 logs, process safety information, process hazard analysis, compliance audits, emergency response, and some operating procedures. Ms. Stotts, coordinated document receipt and management including confidential business information (CBI), and reviewed incident reports. I reviewed applicability, hazard assessment, some operating procedures, training, mechanical integrity, management of change, pre-startup safety review, employee participation, hot work permits, contractors, management system, RMP, five-year accident history, and general duty clause.

## **OPENING CONFERENCE**

At about 10:30 am on January 23, 2017, an opening conference was held. A sign in sheet was passed around and filled out (Attachment 3). I presented my credentials to those present. I described the purpose and reason for the inspection. I provided MGPI a notice of inspection that I and Munim Hussain signed. I had provided a preliminary list of documents to be reviewed

during the inspection and MGPI had a box of documents to be reviewed sorted to my document numbers.

### **EPCRA TIER II AND OSHA DOCUMENTS**

Prior to the inspection, I reviewed the EPCRA Tier II document submitted by MGPI. Hydrochloric acid, CAS # 7647-01-0, was listed at a maximum daily amount of 23,135 pounds. This hydrochloric acid is 31% and thus not regulated by 40 C.F.R. Part 68. Anhydrous ammonia CAS # 7664-41-7, was listed at a maximum daily amount of 9,440 pounds. Just below the threshold of 10,000 pounds and thus not regulated. If the amount of anhydrous ammonia on-site increases, it would become regulated by 40 C.F.R. Part 68 and MGPI would have to include it on its RMP. Phosphorus oxychloride CAS # 10025-87-3 was listed at a maximum daily amount of 1,087 pounds. Below the threshold of 5,000 pounds and thus not regulated by 40 C.F.R. Part 68. Propylene oxide, CAS # 75-56-9, was listed at a maximum daily amount of 56,460 pounds. Above the threshold of 5,000 pounds and thus regulated by 40 C.F.R. Part 68.

A review of MGPI's OSHA 300 log for the last 4 years did not identify any incidents that would meet the requirements of 40 C.F.R. Part 68.49 as an accident required to be report in the RMP's 5-year accident history section. There is an active OSHA inspection ongoing at MGPI due to the October 21, 2016 incident. The Chemical Safety Board is also investigating the October 21, 2016 incident.

### **HAZARD ASSESSMENT**

MGPI hired a consultant to do a hazard assessment and risk management program review, prior to the last RMP submittal, on May 29, 2014. The contractor used RMP\*Comp to determine the distance to end point, of 0.7 miles, for a toxic worst case and an end point of 0.1 miles for a toxic alterative case using the required parameters. They used Marplot to determine the environmental receptors in the distance to end point circles from the appropriate vessel. The toxic worst case scenario encompasses a residential population of 3180, schools, public recreation, and industrial areas. This hazard assessment meets the required components.

### **PROCESS SAFETY INFORMATION (PSI)**

PSI was stored both electronically and in hard copy at MGPI. MGPI provided information pertaining to the hazards of the regulated substances in the process. This information consisted of toxicity information, permissible exposure limits, physical data, reactivity data, corrosivity data, thermal and chemical stability data, and hazardous effects of inadvertent mixing of different materials that could foreseeably occur. MGPI also provided the majority of the information concerning the technology of the process. They provide a block flow diagram or simplified process flow diagram, safe upper and lower limits for such items as temperatures, pressures, flows or compositions and, an evaluation of the consequences of deviations.

Process chemistry was not in the PSI documentation. MGPI staff were knowledgeable of the process chemistry and were able to provide detailed verbal descriptions of process chemistry. The detailed process chemistry for MGPI's process (Modified B) is potentially proprietary and

protected as confidential business information. We discussed that this requirement could be met with a more generic discussion of the Modified B process chemistry such that it would be informative of the type of chemistry occurring but not contain any proprietary information. Based on the facility having no written process chemistry information, I found the following deficiency:

**1. MGPI Processing, Inc. failed to include process chemistry in the process safety information, per 40 C.F.R. Part 68.65(c)(1)(ii).**

Maximum intended inventory varied in differing places in the PSI documentation. The tank volumes were observed in the field and recorded in picture 4 and picture 7 in Attachment 2. The day tank is labeled 2,000 gallons. The bulk tank is labeled 12,000 gallons. Munim stated that they use administrative controls to limit the volume of propylene oxide in the tanks to 70%, and Node 26 on page MGP-EPA000903 of the Modified B Process Safety Information document (CBI) (Attachment 4) lists an upper level limit. Some of the PSI seemed to agree with this while some were slightly different at about 75% capacity. Node 26 on page MGP-EPA000903 of the Modified B Process Safety Information document (CBI) also lists the maximum operating capacity and maximum capacity of the propylene oxide bulk tank. When compared, this maximum operating capacity is not 70% of the maximum capacity. The maximum operating capacity of the propylene oxide day tank appears to be about 50% of the day tank maximum capacity, on page MGP-EPA000906 of the Modified B Process Safety Information document (CBI). The Process Safety Management Written Plan (MGP-EPA000695 to MGP-EPA000704) (Attachment 5) states that the facility has a total capacity of 12,000 gallons of propylene oxide and administrative controls limit the amount to a maximum of 75% of capacity – 9,000 gallons. The maximum amount on hand is 62,370 pounds. Converting 9,000 gallons to pounds using a density 6.9 pounds/gallon from <https://cameochemicals.noaa.gov/chemical/5159> gives 62,100 pounds. It appears MGPI used a density of 6.93 here.

No maximum inventory of piping PSI documentation was found during the inspection. The Modified B Process Safety Information document (CBI) page MGP-EPA000907, provides propylene oxide delivery system PSI, but not piping system volume. However, there appears to have been a piping volume figured into the inventory listed in the RMP. It does not appear that the actual maximum intended inventory number is above the amount listed in the RMP. Because the quantity and maximum capacity are reported on different documents and the RMP plan inconsistently and there is no inventory of piping inventory, I found the following deficiency:

**2. MGPI Processing, Inc. failed to include accurate maximum intended inventory in process safety information, including propylene oxide piping, per 40 C.F.R. Part 68.65(c)(1)(iii),**

PSI pertaining to the equipment in the process included information pertaining to the equipment in the process shall include: materials of construction, piping and instrument diagrams (P&ID's), electrical classification, relief system design and design basis, and ventilation system design.

MGPI did not provide documentation that all Modified B equipment complies with recognized and generally accepted good engineering practices (RAGAGEP). Attachment 5, The Process

Safety Management Written Plan (MGP-EPA000699) 2.2.10.2 states “Documentation of RAGAGEPs for Modified B is not yet completed.” However, they are working on it. Prior to the announcement of this inspection MGPI had contracted with Burns and MacDonald, an engineering consultant, to do an engineering study of Modified B that would identify RAGAGEP and identify any equipment issues needing addressed. This was not complete at the time of this inspection but is expected in the coming year. MGPI provided some documentation that shows parts of Modified B process were build according to RAGAGEP including; Propylene Oxide Relief Valves, Propylene Oxide Tanks, Lower Fan Modified B Ventilation, Electrical Classification Guide (CBI), Modified B Process Safety Information (CBI), and P&ID (CBI) (Attachment 4, 5, and 6).

Due to the above I find the following deficiency:

- 3. MGPI Processing, Inc. failed to include recognized and generally accepted good engineering practice not included in process safety information for portions of the Modified Starch B process, per 40 C.F.R. Part 68.65(d)(2).**

#### **PROCESS HAZARD ANALYSIS (PHA)**

MGPI did a PHA on March 18, 2015 (2015 PHA MGP-EPA001081 to MGP-EPA001257, CBI, Attachment 7), covering the entire facility. The 40 C.F.R. Part 68 covered process is the Modified B process covered in nodes 26 to 29. Facility personnel stated that incidents in the electronic database were reviewed for the last two years but no list was included in the PHA. The previous PHA revalidation had been done on October 12, 2013. So reviewing the last two years of incidents is appropriate.

No written schedule of when findings are to be resolved, documenting the actions to be taken, or documenting the resolution was provided with the PHA. The PHA findings were put into the Management of Change (MOC) system and task list database. MGPI was eventually able to show that all PHA findings for nodes 26 to 29 had been completed at the time of the inspection by tracking the findings through MOCs, work orders, and other documents (Attachment 8).

Due to the above I find the following deficiency:

- 4. MGPI Processing, Inc. failed to have a written schedule for addressing the process hazard analysis, 40 C.F.R. Part 68.67(e)**

#### **OPERATING PROCEDURES (SOPs)**

I requested to review the procedures for activities leading to the 10/21/2016 incident. Upon arrival I was provide almost two feet of procedures. I selected some dealing with propylene oxide to review. I reviewed General Operating Procedures and Initial Start-Up Procedures, MGP-EPA002238 to MGP-EPA002355 (CBI). Amber Whisnant reviewed Propylene Oxide Bulk Tank PO-BT, MGP-EPA001834 to MGP-EPA001918 (CBI) and Propylene Oxide Day Tank PO-DT, MGP-EPA001919 to MGP-EPA001966 (CBI). These operating procedures are in Attachment 9 Operating Procedures (CBI). The operating procedures reviewed addressed each of the operating phases required under 40 CFR 68.69.

## **TRAINING**

Training at MGPI is largely done electronically. MGPI utilizes a system that includes email notifications when trainings are coming due and escalating notification up the chain of command as trainings come due and past due. I asked for a list and was given a list of employees operating the Modified B, covered process. I selected three operators at random and requested their training history. I received a document we titled training history report (Attachment 10). Operators also do refresher training on specific operating procedures utilized in their job tasks every two years. This document and discussion showed that a refresher training shall be provided at least every three years.

## **MECHANICAL INTEGRITY**

I had requested the mechanical integrity written procedure. MGPI provided the Process Safety Management Written Plan, Attachment 5. Section 8 Mechanical Integrity, on page MGP-EPA000702 is an overarching mechanical integrity procedure. MGPI also provided detailed procedures for specific maintenance tasks. MGPI provided a Safety Modified Starch PSM Preventive Maintenance List MGP-EPA000705 to MGP-EPA000710 (Attachment 11) that documents inspections, tests, and preventative replacement of equipment.

MGPI provided documentation of a ten-year replacement standard for the pressure relief valves (PRV). However, MGPI's insurance company set shorter timeframes. The large pressure relief valves are to be replaced every five years and the small PRVs are to be replaced every seven years. One pressure relief valve on the propylene oxide day tank, PRV-235, appeared to be over the replacement/inspection interval of 7 years as of November 2016, as seen on MGP-EPA000707. Later, MGPI was able to find documentation of an additional replacement of this PRV on May 19, 2010, in Attachment 12. Meaning the PRV is not overdue until May 19, 2017. Replacement of the PRV is planned prior to this date.

## **MANAGEMENT OF CHANGE (MOC)**

MGPI's Process Safety Management Written Plan Section 10 covers management of change (Attachment 5). MGPI also has a standard operating procedure titled Management of Change, MGP-EPA000916 to MGP-EPA000934, that is the written procedure for managing change. This procedure covers the technical basis for the proposed change, impact of change on safety and health, modifications to operating procedures, necessary time period for the change, and authorization requirements for the proposed change. The necessary time period for permanent changes was not entirely clear in the procedure. After discussion with MGPI, it became clear that the time from MOC approval to the time the changes occurred is set at the start of the MOC process and can vary due to the requirement of each change. We discussed MGPI adding language to the MOC procedure to make this clear. I requested a list of January 31, 2012, to January 18, 2017 management of changes. This was provided upon arrival. I reviewed several MOCs including AT\_2\_2016\_33 Bulk Chemical Unloading SOP addendum.

## **PRE-STARTUP SAFETY REVIEW (PSSR)**

PSSR are done for every MOC in Modified B. There were several PSSR checklists included in the MOCs reviewed. All were completed and no obvious errors were noted at the time of inspection.

## **COMPLIANCE AUDIT**

Amber Whisnant reviewed the two most recent compliance audits (Attachment 13). The audits were both focused on OSHA's Process Safety Management rule and not on EPA's 40 C.F.R. Part 68 Subpart D—Program 3 Prevention Program. There was not a certification statement that MGPI had evaluated compliance with the provisions of subpart D. This was corrected during the inspection and provided on Wednesday January 25, 2017, dated January 24, 2017.

The latest audit did not appear to cover 40 C.F.R. 68.69(a)(1)(iii) temporary operating procedures, 40 C.F.R. 68.73(d)(2) mechanical integrity inspection and test follow recognized and generally accepted good engineering practices, 40 C.F.R. 68.73(d)(3) mechanical integrity inspection frequency, and 40 C.F.R. 68.85(b) hot work. We discussed how the audits could be improved to include 40 C.F.R. 68 and tools that are available, including EPA 40 C.F.R. 68 checklists.

Both audit reports are a list of items to review and questions for the audit team to ask but does not include any responses or indications that each item was evaluated. Each compliance audit included a summary list of findings/recommendations. There was not documentation of an appropriate response to each of the findings of the December 30, 2012 compliance audit, and no documentation that deficiencies have been corrected. In two days MGPI was able to track down resolutions to the 2012 compliance audit finding. The July 1, 2015 compliance audit findings were actually a summary of the facility's status. No recommendations. If the questions in both compliance audits been fully evaluated, then some of the deficiencies noted during this inspection would have been noted in the audit findings.

Due to the above I find the following deficiencies:

- 5. MGPI Processing, Inc. failed to certify compliance with subpart D Program 3 Prevention Program of 40 C.F.R Part 68, per 40 C.F.R. Part 68.79(a)**
- 6. MGPI Processing, Inc. failed to document resolution of compliance audit findings on the December 30, 2012 audit, per 40 C.F.R. Part 68.79(d)**

Additionally, an unofficial, incomplete RMP compliance audit dated 5/2/14 on the propylene oxide process was given to inspectors.

## **INCIDENT INVESTIGATION**

Prior the inspection I requested a list of Incident Reports/Investigations for all incidents which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance



over the last 3 years, and incident reports/investigations for a spill of 1,224 gallons of ethanol on February 3, 2014, a spill of 30 gallons of propylene oxide on February 27, 2014, a spill of 200 gallons of sodium hypochlorite on July 24, 2016, and a spill of 0.1 gallons of chlorine (Cl) and 0.1 gallons of sulfuric acid on October 21, 2016, that I had identified from the Kansas Department of Health and Environment website <http://maps.kdhe.state.ks.us/ksberspill/>. MGPI identified the February 27, 2014, propylene oxide release as the only incident which resulted in, or could reasonable have resulted in a catastrophic release of a regulated substance in the last five years. From the research I did and the documentation provided during this inspection this does appears to be the only incident in a covered process, which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance, from the covered process. The October 21, 2016 incident also resulted in a release of regulated substance that was or could have been catastrophic, but from a non-covered process. MGPI provided the entire February 27, 2014 incident report (Attachment 14), as well as the other requested incident reports. MGPI uses a standard incident investigation form that includes date of incident, date investigation began, a description of the incident, the factors that contributed to the incident, and any recommendations resulting from the investigation. The date investigation began appeared to be missing but there was a "Date the incident was reported" field that MGPI clarified to mean the date the incident investigation began. All the investigations reviewed started within 48 hours.

### **EMPLOYEE PARTICIPATION**

MGPI's Process Safety Management Written Plan section 1 page MGP-EPA000697 (Attachment 5) was provided as MGPI's employee participation plan. This states that "Employees and their representatives have access to the process hazard analyses and to all other information required to be developed under this standard by making a request to their shift manager or to EHS department." MGPI also has an intranet where PHA, SDS, and other information required by this standard is available to MGPI employees. I made the recommendation to include this practice in the employee participation plan. Operations employees were included in development of process hazard analyses and elements of process safety management.

### **HOT WORK PERMIT**

MGPI does hot work permitting when activities that could introduce an ignition source to a flammable atmosphere. I requested example of hot work permits prior to the inspection. I was provided three examples from April 6, 2016, May 18, 2016, and May 20, 2016. Some of the forms had Y and NA as the process stated. Some had a "-" instead of the NA. We discussed this and the facility was aware of this and is taking corrective actions.

### **CONTRACTORS**

MGPI uses a standard operating procedure titled Contractor Requirements, Training and Control, Document No. EP-016. This procedure details the process for selection, training, and control of contractors at MGPI. I requested two examples of the application of this procedure. MGPI provided two examples of contractor review and training certifications. This program appeared to meet the requirements of 40 C.F.R. Part 68.87.

## **SUBPART E: EMERGENCY RESPONSE**

MGPI has coordinated with the Atchison, Kansas Fire Department. MGPI does have an Emergency Response Plan to be prepared for fire, tornado, bomb threat, threat of violence, power outage, natural gas outage, pipeline issues, injury/illness, or unplanned or accidental discharge of a hazardous substance. MGPI employees do not respond to releases and/or fires beyond incipient events. The Emergency Response Plan states that “MGPI does not have a fire response team, or a HAZWOPER response team. If we can shut a process out safely, before evacuating or going to Shelter, then we will do so.” The plan is not clear that employees are to call the LEPC, SERC, and NRC within 15 minutes of a reportable release.

## **MANAGEMENT SYSTEM**

MGPI provided a standard operating procedure titled “RMP Management System” dated May 29, 2014. This procedure assigned responsibility of the RMP elements to positions at MGPI. It also included a flow chart that detailed the individuals in those positions, and lines of authority.

## **SUBPART G: RISK MANAGEMENT PLAN**

MGP Ingredients, Inc. first submitted a risk management plan (RPM) on June 24, 2004. MGP Ingredients Inc. submitted an updated RMP on May 29, 2009. MGPI Processing, Inc. submitted an updated RMP on May 29, 2014 (Attachment 15), exactly 5 years to the day since the last submission. In reviewing the RMP, I noted that the telephone number for the emergency contact Munim Hussain, Corporate Environmental Engineer is (913) 367-5444 instead of (913) 360-5444 as provided during the inspection. Upon further review, it was noted that the MGPI provided responses in Section 9. Emergency Response of the RMP like they would respond to a release event. MGPI does not respond to its own emergency. They have coordinated emergency response with the local Atchison Fire Department. Risk Management Plan RMP\*eSUBMIT Users’ Manual EPA 540-B-14-001 [https://www.epa.gov/sites/production/files/2014-07/documents/rmp\\_esubmit\\_users\\_manual.pdf](https://www.epa.gov/sites/production/files/2014-07/documents/rmp_esubmit_users_manual.pdf) page 100 to 104 provides some guidance on this section of the RMP. It states that “the extent to which you need to fill out this portion of the RMP depends on whether your employees will respond to releases of regulated substances at your facility....If your employees do not respond to releases of regulated substances at your facility, you need only respond to the first two (9.1 a and 9.1 b) and the last three (9.7a, 9.7b, and 9.8) emergency response data elements.” Additionally, Section 9.2.b. states “Does your facility have its own written emergency response plan? Click the check box for this question if you have a response plan (not just an emergency action plan as required by OSHA under 29 CFR 1910.38).” MGPI has an emergency response plan, but it does not include release response actions such as responding to toxic gas leaks in proper personal protection equipment and using leak response kits to stop toxic leaks.

Due to the above I find the following deficiencies:

- 7. MGPI Processing, Inc. failed to include correct emergency contact telephone number in the risk management plan submittal, per 40 C.F.R. Part 68.160(b)(6)**

**8. MGPI Processing, Inc. failed to correctly indicate non responding facility status in risk management plan submittal, per 40 C.F.R. Part 68.180**

**RELEASE REPORTING**

On July 24, 2016, there was a release of 200 gallons of 12% sodium hypochlorite. I requested the incident report for this incident and was provided it during this inspection (Attachment 16). The incident occurred at 39.558507 North 95.132563 West. The incident report stated "...the sodium hypochlorite had spilled and traveled through the rain water collection pit in the yard and was flowing down to the south side of the modified lot." "It was reported that the spilled liquid never made it to the creek although a small amount did escape MGPI property to the south of the Modified B area, pooling up just before entering the creek." The release was not reported to the National Reporting Center (NRC) or the LEPC. In a February 03, 2017 email to me (Attachment 17) Wesely D. Later, Atchison County Director of Emergency Management confirmed that he was not notified of a July 24, 2016 release by MGPI but was notified by Kansas Department of Health and Environment. Sodium hypochlorite, CAS # 7681-52-9, is a listed hazardous substance under 40 C.F.R. Part 302.4 with a reportable quantity of 100 pounds. Given a specific gravity of 1.16g/cm<sup>3</sup> for 12% sodium hypochlorite this 200 gallons release was about 1,936 pounds. The majority of this release remained liquid, but a fraction released to the air.



Location of July 24, 2016 incident

On October 21, 2016, a release of chlorine as outline in the CAA 112(r)(1) GENERAL DUTY CLAUSE section of this report occurred. MGPI contacted the National Response Center at 11:16 on October 21, 2016, and indicated that the incident was discovered at 08:30 (NRC Report # 1162154). The report was made 166 minutes after the release was discovered. Munim Hussain, Randy Rhodes, and Andrew Brought, stated during the inspection that the released substance and quantity was not immediately clear. The substance became evident based on the smell of the releasing substance, the source of the release from the sodium hypochlorite tank, and the sulfuric acid contain tanker truck. Emergency response actions were occurring during the time from discovery to report. Randy Rhodes was coordinating evacuation of employees and change of muster point due to shifting winds. Munim Hussain was coordinating response action with the fire department. MGPI's incident report (Attachment 18) states that the venting of air emission and loss of containment for the sodium hypochlorite tank began at approximately 7:57 am. At 8:10 am MGPI advised the firefighters about the chemicals involved. At 8:43 am two firefighters

were able to approach the truck and close the flow valve, turn of the truck engine, and activate the tank farm sprinkler deluge system. Between approximately 8:54 to 9:09 am the vapor cloud had dissipated (Attachment 18). The call to the National Response Center came about 127 minutes after the vapor cloud dissipated. 40 C.F.R. Part 302.6(a) states that “Any person in charge of a vessel or an offshore or an onshore facility shall, as soon as he or she has knowledge of any release (other than a federally permitted release or application of a pesticide) of a hazardous substance from such vessel or facility in a quantity equal to or exceeding the reportable quantity determined by this part in any 24-hour period, immediately notify the National Response Center”. Chlorine, CAS # 7782-50-5, is a listed hazardous substance under 40 C.F.R. Part 302.4 with a reportable quantity of 10 pounds. Between 7:57 and 11:16 on October 21, 2016, Munim Hussain made about 15 calls according to the phone records provided in the response to a response to a U.S. EPA Region 7 Chemical Release Questionnaire on January 17, 2017 (Attachment 19). In this response MGPI, on page MGP-EPA000196, estimated 3,550 pounds of chlorine were released. As MGPI explained this value is an estimate as some chlorine would hydrolyze into aqueous acid solutions that would condense on solid surfaces and thus not release into the air column.

Due to the above I find the following deficiencies:

**9. MGPI Processing, Inc. failed to immediately notify the National Response Center of a release of chlorine above the reportable quantity on October 21, 2016, per 40 C.F.R. Part 302.6**

**10. MGPI Processing, Inc. failed to immediately notify the National Response Center and local emergency response of a release of sodium hypochlorite above the reportable quantity on July 24, 2016, per 40 C.F.R. Part 302.6 & 355**

#### **CAA 112(r)(1) GENERAL DUTY CLAUSE**

On October 21, 2016, a release incident occurred at MGPI. MGPI provided an incident report for this incident (Attachment 18). At about 7:35 am a tanker truck containing 46,160 pounds of sulfuric acid arrived at the unloading pad at the Specialty Starch Operations building. Although no connection had been made from the tanker truck to the appropriate tank farm piping a MGPI operator signed his initial on a document indicating the connection to piping and storage tanks were correct and ready for unloading. The operator and truck driver then went to the unloading pad and the operator unlocked the gate and cap to the sulfuric acid line and pointed out the sulfuric acid line to the truck driver. The operator then went back inside. The MGPI Standard Operating Procedure for the sulfuric acid bulk tank provides that the operator should not allow chemical delivery driver to connect the sulfuric acid hose to any other connection and is to open the sulfuric acid valve. The truck driver hooked the sulfuric acid line up to the tank of sodium hypochlorite tank and opened the valve on the sodium hypochlorite line. Sulfuric acid entered the sodium hypochlorite tank leading to chemical reaction and release of chlorine gas. Additional factors that contributed to the release are the pipe connections and valve in close proximity, the same size fitting are used for sulfuric acid and sodium hypochlorite, and adequacy of labeling on both lines and connections. The operator had unlocked the correct line and placed a lock on the angle iron above the correct line. The cap to the correct line was unlock but still on the line post incident. The cap to the line the truck drive connected to was on the ground with a lock attached

post incident. It is unclear if the driver was able to remove the cap while it was locked, if the lock was forced, if the lock malfunctioned, or if the lock was not locked. At the time of this inspection MGPI had not been able to interview the truck driver involved in the incident.

The operators and truck driver in the area of the release were not able to utilize emergency shutoff valves or deluge system activation switches before evacuating the area. After a delay due to transporting injured leaving only a single firefighter on-site and the requirement of a buddy system, at 8:43 a.m. two firefighters were able to close the flow valve on the truck trailer and activate the tank farm's sprinkler deluge system. Once the deluge system activated the vapor emissions began to dissipate.



Photo from "Release 10-21-2016 (Sodium Hypochlorite and Sulfuric Acid)" MGP-EPA000114, labels added.

Node 15 of the 2015 PHA (CBI) (Attachment 7) is the sodium hypochlorite bulk tank with unloading line. Item 15.9 is high concentration of contaminants, with the cause of putting the wrong chemical into the tank, and 15.16 is criticality, with the cause of putting the wrong chemical into the tank. Both are recognized to cause potential chemical reaction, loss of containment, offsite environmental impact, personnel injury, and loss of product or production. Safeguards listed for these hazards include operator training, standard operating procedures, reputable supplier, emergency action/response plan, ventilation system, escape respirators, and emergency response.

The sulfuric acid fill line and bulk tank and the sodium hypochlorite bulk tank are not directly connected to any propylene oxide containing equipment. They are in the close proximity in the same Specialty Starch Operations Tank Farm as the propylene oxide bulk and day tanks. This release did not impact the covered process at the time of the release.



Due to the above I find the following deficiency:

- 11. MGPI Processing, Inc. failed to maintain a safe facility by not fully implementing an operating procedure to insure correct alignment during unloading operations leading to a release of chlorine causing injury of employees and public, evacuations, and sheltering in place, per Clean Air Act Section 112(r)(1).**

#### **CLOSING CONFERENCE**

We held a closing conference at 2:30 PM on January 26, 2017. A sign in sheet was filled out and is available in Attachment 20. We discussed what was reviewed during this inspection. We provided a receipt for samples and documents that was collected during the inspection (Attachment 21). MGPI claimed some documentation confidential business information (CBI). We documented this on a confidentiality notice, and provided a notice and opportunity to substantiate confidential business information claim (Attachment 22). We listed the above mentioned areas of concern, and provided a notice of preliminary findings (Attachment 23).

 3/23/2017  
Dave Hensley  
Lead Compliance Inspector

## **ATTACHMENTS**

- 1- Notice of Inspection
- 2- Photo Log
- 3- Opening Conference Sign in Sheet
- 4- Process Safety Information document (CBI)
- 5- The Process Safety Management Written Plan
- 6- Process Safety Information
- 7- Process Hazard Analysis (CBI)
- 8- Resolutions of PHA Findings
- 9- Operating Procedures (CBI)
- 10- Training History Report
- 11- Modified Starch Preventive Maintenance List
- 12- Documentation of Additional Replacement of PRV
- 13- Two Most Recent Compliance Audits
- 14- Propylene Oxide Release 2-27-2014
- 15- Risk Management Plan
- 16- July 24, 2016, Incident Report
- 17- LEPC Email Response 2-3-2017
- 18- 10-21-2016 Incident Sodium Hypochlorite and Sulfuric Acid Mixing
- 19- Response to U.S. EPA Region 7 Chemical Release Questionnaire on January 17, 2017
- 20- Closing Sign in Sheet
- 21- Receipt for Samples and Documents
- 22- Confidentiality Notice
- 23- Notice of Preliminary Findings
- 24- CD – Attached to Report